

REMARKS/ARGUMENTS

Favorable reconsideration of this application is requested in light of the following remarks and discussion.

Claims 1-20 are pending in the present application. Claims 11-20 are withdrawn.

The outstanding Office Action rejected Claims 1, 3, and 5-8 under 35 U.S.C. § 103(a) as unpatentable over Vowles et al. (U.S. Patent No. 5,076,205, hereinafter “Vowles”) in view of Kaveh et al. (U.S. Patent No. 5,758,680, hereinafter “Kaveh”) and Lappen et al. (U.S. Patent No. 7,032,614, hereinafter “Lappen”); rejected Claims 2 and 4 under 35 U.S.C. § 103(a) as unpatentable over Vowles in view of Lappen and further in view of Moriya et al. (U.S. Patent No. 5,441,076, hereinafter “Moriya”); and rejected Claims 9-10 under 35 U.S.C. § 103(a) as unpatentable over Vowles in view of Lappen and further in view of Young, Jr. (U.S. Patent No. 6,578,600, hereinafter “Young”).

With respect to paragraph 1 of the Office Action, Applicants submit herewith a copy of the Information Disclosure Statement (IDS) filed on January 21, 2010, including a list of all patents, publications, applications, or other information submitted for consideration by the office. Accordingly, it is respectfully requested that the reference listed in the IDS be considered by the Examiner.

Turning now to the rejections under 35 U.S.C. § 103(a), Applicants respectfully request reconsideration of these rejections, as discussed below.

Claim 1 recites:

A semiconductor processing apparatus comprising:
a common transfer chamber;
a plurality of processing chambers, connected to the common transfer chamber, for processing a substrate;

a transfer mechanism, disposed within the common transfer chamber, for transferring the substrate with respect to the processing chambers; and

a plurality of gas supply systems for supplying predetermined gases, the gas supply systems being provided at the processing chambers, respectively,

wherein each of the gas supply systems includes:

a primary-side connection unit connected to gas sources of the predetermined gases, the primary-side connection unit being disposed underneath the corresponding one of the processing chambers;

a flow rate control unit for controlling flow rates of the predetermined gases, the flow rate control unit being disposed on gas lines through which the gases are supplied from the primary-side connection unit to the corresponding processing chamber, the flow rate control unit being disposed above the primary-side connection unit so as to at least partially overlap therewith; and

a gas box for enclosing the flow rate control unit, the gas box having a cover removably attached thereto for providing access to the flow rate control unit.

According to the invention recited in Claim 1, the gas supply system includes a primary-side connection unit and a flow rate control unit. As described in Applicants' specification on page 12, lines 6-15, the primary-side connection unit is mounted on the floor of the clean room *before* the processing apparatus is installed in the clean room. The primary-side connection unit can be installed separately because in the claimed invention, the gas supply systems *separately* include a primary-side connection unit and a flow rate control unit.

The primary-side connection unit can be easily set up because the installation of the primary-side connection unit is finished before the processing apparatus is mounted. Further, because the primary-side connection unit of the gas supply system is set up before the processing apparatus is installed in the clean room, the construction period after installing the

processing apparatus is reduced. It is respectfully submitted that the cited references do not disclose or suggest each of the features recited in Claim 1.

Specifically, the Office Action acknowledges that Vowles “fail[s] to explicitly disclose the details of the gas supply systems” and instead asserts that the gas delivery system 128 in Kaveh corresponds to the claimed gas supply systems which include a primary-side connection unit and a flow rate control unit being disposed above the primary-side connection unit so as to at least partially overlap therewith. The Office Action in paragraph 7 asserts that manual shut-off valves 138 shown in Fig. 2 of Kaveh correspond to the claimed primary-side connection unit and the mass-flow controller 142 corresponds to the claimed flow rate control unit.

However, as shown in Fig. 2 of Kaveh, the elements of the gas supply system 128 of Kaveh are not easily constructed separately in a clean room. Therefore, Kaveh does not disclose a gas supply system in which a primary-side connection unit of which set up *before* the processing apparatus is mounted, so that the construction period after installing the processing apparatus is reduced.

Lappen fails to remedy the deficiencies discussed above regarding Vowles and Kaveh in relation to amended independent Claim 1. Accordingly, no reasonable combination of Vowles, Kaveh, and Lappen would include all the features recited in amended independent Claim 1, or claims depending therefrom. The other cited references to Moriya and Young were applied for other features recited in dependent claims and do not provide any additional support for concluding that Claim 1 would have been obvious. Therefore, Applicants respectfully request the rejection of Claims 1-10 under 35 U.S.C. § 103(a) be withdrawn.

With respect to the rejections of Claims 5 and 6, Applicants note that the Office Action in paragraph 33 indicates that Applicants have not shown the criticality of the features recited in Claims 5 and 6. Accordingly, as discussed in the original specification at page 17,

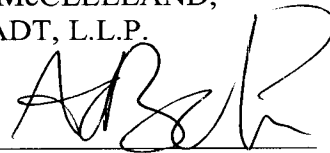
lines 7-13, Applicants submit that the feature of the flow rate control unit being disposed to be inclined downwardly from an inner portion located above the primary-side connection unit toward an outer portion located in front of the primary-side connection unit, as recited in Claim 5, helps to improve the maintainability for the flow rate control unit within the gas box 14. Further, with respect to Claim 6, as discussed in the original specification at page 17, lines 1-6, the feature of the gas box enclosing these units being installed such that the rear part thereof lies under the plan view contour of the processing chamber, as recited in Claim 6, helps to make the gas supply system compact in structure, thus reducing the footprint of the processing apparatus. Thus, it is respectfully submitted that the features of Claims 5 and 6 are not a mere rearrangement of parts, as asserted in the Office Action. Accordingly, it is respectfully requested that the rejection of Claims 5 and 6 be withdrawn.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below-listed telephone number.

Respectfully submitted,

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